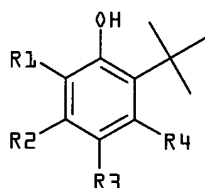


CLAIMS

What is claimed is:

1. A single layered electrophotographic photoreceptor comprising a photosensitive layer having at least a charge generating material, a charge transport material and a binder on a conductive support, wherein the charge generating material is amorphous titanylphthalocyanine, and the photosensitive layer includes a hindered phenol compound having at least three structural units represented by Formula 1 in a single molecule:

Formula 1



wherein R1, R2, R3 and R4 are independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted C₁-C₂₀ alkyl group, a substituted or unsubstituted C₆-C₂₀ aryl group, a substituted or unsubstituted C₁-C₂₀ alkoxy group, a hydroxy group, a halogen atom, and a substituted or unsubstituted amino group.

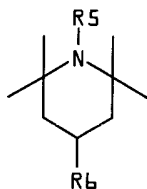
2. The single layered electrophotographic photoreceptor of claim 1, wherein the amount of the compound having at least three structural units represented by Formula 1 is 0.1-10 parts by weight per 100 parts by weight of a mixture of the charge generating material, the charge transport material, the hindered phenol compound and the binder.

3. The single layered electrophotographic photoreceptor of claim 1, wherein the amorphous titanylphthalocyanine is obtained by using an acid-pasting method.

4. The single layered electrophotographic photoreceptor of claim 1, wherein the photosensitive layer includes a hindered amine compound.

5. The single layered electrophotographic photoreceptor of claim 4, wherein the hindered amine compound is a compound having at least two structural units represented by Formula 2 in a single molecule:

Formula 2



wherein R₅ and R₆ are independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted C₁-C₂₀ alkyl group, a substituted or unsubstituted C₆-C₂₀ aryl group, a substituted or unsubstituted C₁-C₂₀ alkoxy group, a hydroxy group, a halogen atom, a substituted or unsubstituted amino group.

6. The single layered electrophotographic photoreceptor of claim 4, wherein the amount of the hindered amine compound is 0.1-5 parts by weight per 100 parts by weight of a mixture of the charge generating material, the charge transport material, the hindered phenol compound and the binder.

7. The single layered electrophotographic photoreceptor of claim 1, wherein the amount of the charge generating material is 2-10 parts by weight per 100 parts by weight of a mixture of the charge generating material, the charge transport material, the hindered phenol compound and the binder.

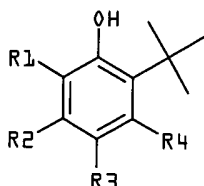
8. The single layered electrophotographic photoreceptor of claim 1, wherein the amount of the charge transport material is 10-60 parts by weight per 100 parts by weight of a mixture of the charge generating material, the charge transport material, the hindered phenol compound and the binder.

9. The single layered electrophotographic photoreceptor of claim 1, wherein the charge transport material includes a hole transport material and an electron transport material, and the amount of the electron transport material is 0.1-10 parts by weight per 100 parts by weight of the hole transport material.

10. An electrophotographic cartridge, comprising:
a single layered electrophotographic photoreceptor comprising

a photosensitive layer having at least a charge generating material, a charge transport material and a binder on a conductive support, wherein the charge generating material is amorphous titanylphthalocyanine, and the photosensitive layer includes a hindered phenol compound having at least three structural units represented by Formula 1 in a single molecule:

Formula 1



wherein R1, R2, R3 and R4 are independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted C₁-C₂₀ alkyl group, a substituted or unsubstituted C₆-C₂₀ aryl group, a substituted or unsubstituted C₁-C₂₀ alkoxy group, a hydroxy group, a halogen atom, and a substituted or unsubstituted amino group; and

at least one of:

- a charging device that charges the electrophotographic photoreceptor;
- a developing device which develops an electrostatic latent image formed on the electrophotographic photoreceptor; and
- a cleaning device which cleans a surface of the electrophotographic photoreceptor,

wherein the electrophotographic cartridge is attachable to/detachable from an image forming apparatus.

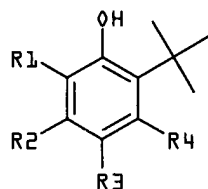
11. An electrophotographic drum, comprising:

a drum that is attachable to and detachable from an electrophotographic apparatus;
and

a single layered electrophotographic photoreceptor, disposed on the drum, the single layered electrophotographic photoreceptor comprising:

a photosensitive layer having at least a charge generating material, a charge transport material and a binder on a conductive support, wherein the charge generating material is amorphous titanylphthalocyanine, and the photosensitive layer includes a hindered phenol compound having at least three structural units represented by Formula 1 in a single molecule:

Formula 1



wherein R1, R2, R3 and R4 are independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted C₁-C₂₀ alkyl group, a substituted or unsubstituted C₆-C₂₀ aryl group, a substituted or unsubstituted C₁-C₂₀ alkoxy group, a hydroxy group, a halogen atom, and a substituted or unsubstituted amino group.

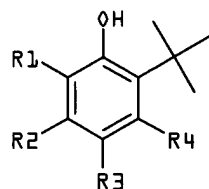
12. An image forming apparatus comprising:

a photoreceptor unit comprising:

a single layered electrophotographic photoreceptor comprising:

a photosensitive layer having at least a charge generating material, a charge transport material and a binder on a conductive support, wherein the charge generating material is amorphous titanylphthalocyanine, and the photosensitive layer includes a hindered phenol compound having at least three structural units represented by Formula 1 in a single molecule:

Formula 1



wherein R1, R2, R3 and R4 are independently selected from the group consisting of a hydrogen atom, a substituted or unsubstituted C₁-C₂₀ alkyl group, a substituted or unsubstituted C₆-C₂₀ aryl group, a substituted or unsubstituted C₁-C₂₀ alkoxy group, a hydroxy group, a halogen atom, and a substituted or unsubstituted amino group;

a charging device which charges the photoreceptor unit;

an imagewise light irradiating device which irradiates the charged photoreceptor unit with imagewise light to form an electrostatic latent image on the photoreceptor unit;

a developing unit that develops the electrostatic latent image with a toner to form a toner image on the photoreceptor unit; and

a transfer device which transfers the toner image onto a receiving material.